TCM-3111

H.264 Megapixel IP PoE Fixed Camera

Hardware User's Manual

Ver. 2011/12/1

ACTi
Connecting Vision

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0. Precautions

Read these instructions

You should read all the safety and operating instructions before using this product.

Heed all warnings

You must adhere to all the warnings on the product and in the instruction manual. Failure to follow the safety instruction given may directly endanger people, cause damage to the system or to other equipment.

Servicing

Do not attempt to service this video device yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Trademarks

All names used in this manual are probably registered trademarks of respective companies.

Liability

Every reasonable care has been taken during the writing of this manual. Please inform your local office if you find any inaccuracies or omissions. We cannot be held responsible for any typographical or technical errors and reserve the right to make changes to the product and manuals without prior notice.

FCC/CE Regulation

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the users will be required to correct the interference at their own expense.

1. Introduction

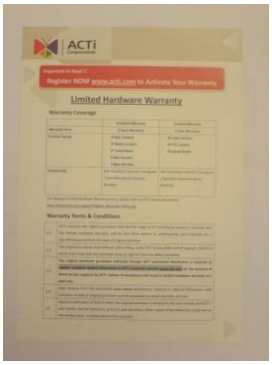
Package Contents

TCM-3111

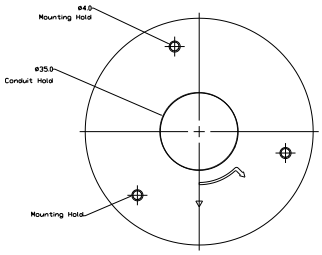
Product CD

Accessories

Warranty Card



Drill Template



Drill template

Features and Benefits

This is a cutting-edge digital video surveillance camera. It can compress and transmit real time images with outstanding image quality (18 FPS @ SXGA, 1280x1024) through a standard TCP/IP network. This camera is your best choice to build an intelligent IP surveillance system.

H.264/MPEG-4/MJPEG Triple Codec Dual Streaming

This device supports 3 compression formats, H.264, MPEG-4 and MJPEG. It brings superior image quality at 18 frames per second up to a resolution of SXGA (1280 x 1024) pixels, and offers up to 26 frames per second in HD720 (1280x720). In D1 (720 x 480) / VGA (640 x 480) / QVGA / QQVGA the device reaches 30 frames per second.

Built-in Hardware Motion Detection

No more external motion sensors are required. You may assign up to 3 video motion detection areas. By tuning the object size and sensitivity, it will reliably detect objects passing though in view. Hardware motion detection also offers better sensitivity and faster response time than software motion detection.

Powerful Bundled Surveillance Software

To extend the capabilities of the IP Camera series, a powerful surveillance program is included in the package for free. Users can easily use an existing PC as a digital video recorder. Scheduled recording and manual recording keep every important video recorded in the local hard disk. Reliable and accurate motion detection with instant warning enables immediate response in every condition. Quick and simple search and playback function lets you easily find the images and video you want.

Software Development Kit Support

This IP Camera can be integrated or controlled by applications from third party software developers. Software developers can save considerable efforts by using our Streaming Library or ActiveX control. Please contact us for details on integration support.

Safety Instructions

Don't use the power supply with other voltages

This device is likely to be damaged or damage other equipments / personnel, if you use a power supply with different voltage than the one included with this device. All warranty of this product will be voided in the situations above.

Cleaning

Disconnect this video product from the power supply before cleaning.

Attachments

Do not use attachments not recommended by the video product manufacturer as they may cause hazards.

Water and Moisture

Do not use this video product near water, for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool and the like.

Don't use accessories not recommended by the manufacturer

Only install this device and the power supply in a dry place protected from weather

Servicing

Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Damage Requiring service

Disconnect this video product from the power supply immediately and refer servicing to qualified service personnel under the following conditions.

1) When the power-supply cord or plug is damaged
2) If liquid has been spilled, or objects have fallen into the video product.
3) If the video product has been directly exposed to rain or water.
4) If the video product does not operate normally by following the operating Instructions in this manual. Adjust only those controls that are covered by the instruction manual, as an improper adjustment of other controls may result in damage, and will often require extensive work by a qualified technician to restore the video product to its normal operation.

Safety Check

Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine if the video product is in proper operating condition.

Physical description

1) Power LED

LED light will light up after the Camera has successfully completed the boot process.

2) Ethernet Port

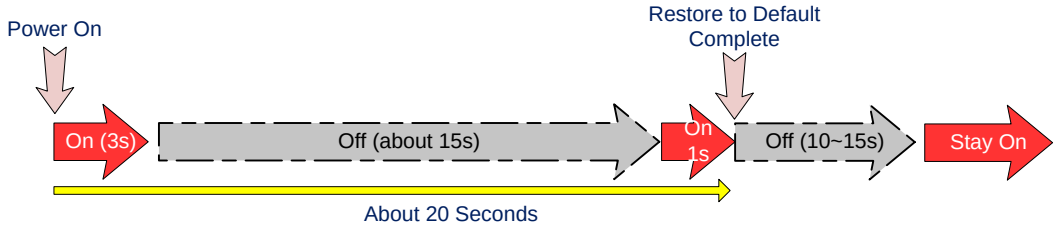
The IP device connects to the Ethernet via a standard RJ45 connector. Supporting NWAY, this IP device can auto detect the speed of local network segment (10Base-T/100Base-TX Ethernet).

3) Reset Button

Step 1: Switch off IP device by disconnecting the power cable

Step 2: Press and continue to hold the Reset Button (with a sharp tipped object, like a pen.)

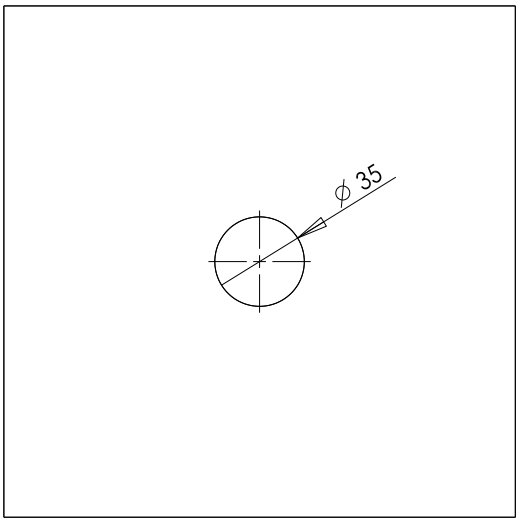
Step 3: ***Reconnect the power cable while continuing to hold the reset button.*** The red Power LED light will flash on for 3 second first, turn off for about 15 seconds, flash on for another second and turn off again. By this time the reset to default operation is already completed. ***This will take around 20 seconds from power up.*** You may then release the reset button. This length of time fluctuates slightly with the environment. The Power LED light will come back on and stay on after a few more seconds. The unit will start up with factory default settings automatically.



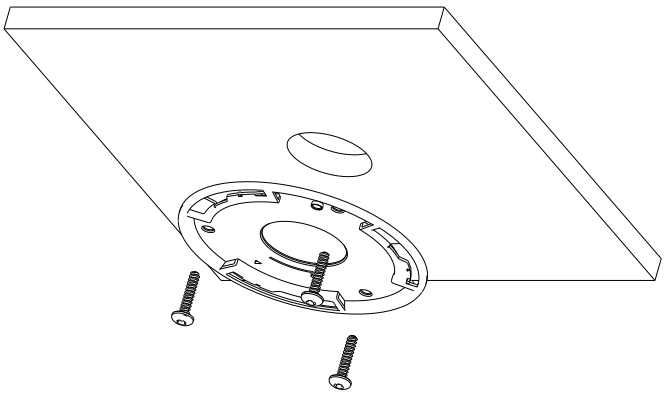
Installation Procedure

Ceiling Mount

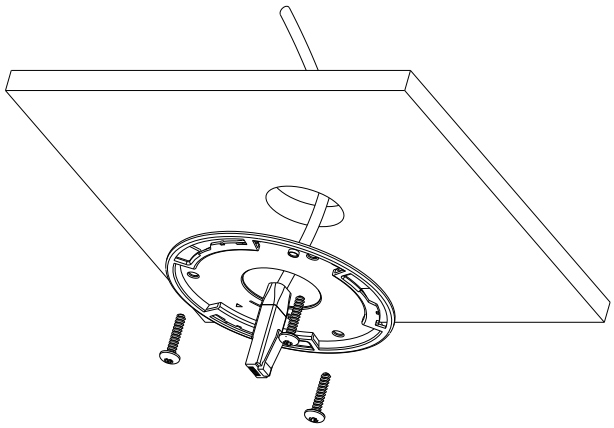
Use the drill template, and drill a hole with φ 35 on the ceiling



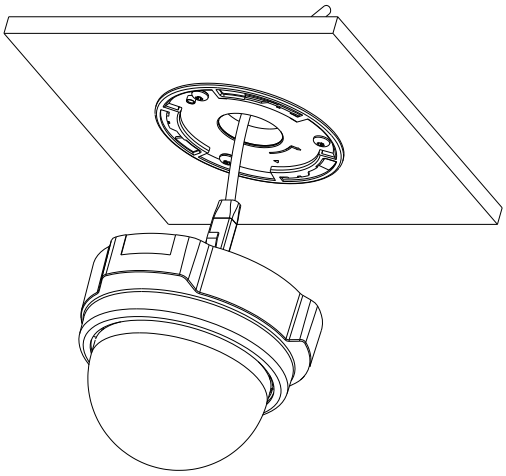
Tighten the plate to ceiling with M4*20 screws



Connect cables through the hole on the ceiling and plate, or on the side of casing

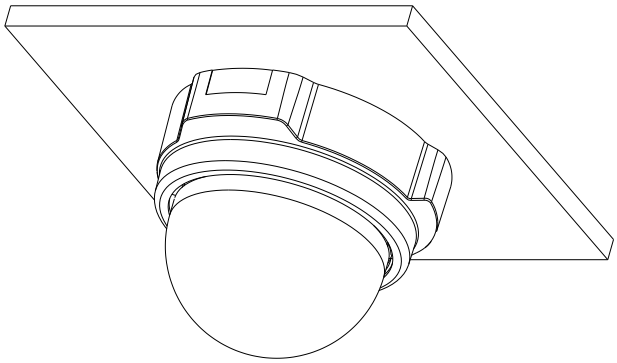


Fasten the camera to ceiling by turning clockwise direction



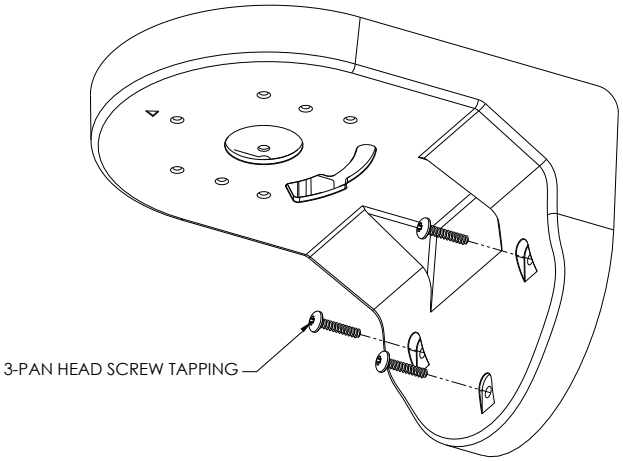
Insert the Network cable through the mounting plate and connect to the camera. Then use the little strap in bundled accessory to fasten the network cable.

1.6.1.6 Done

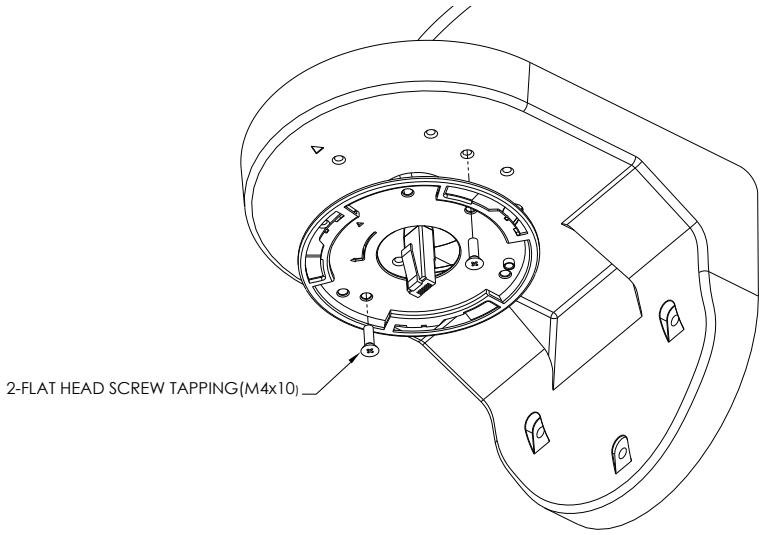


Wall Mount

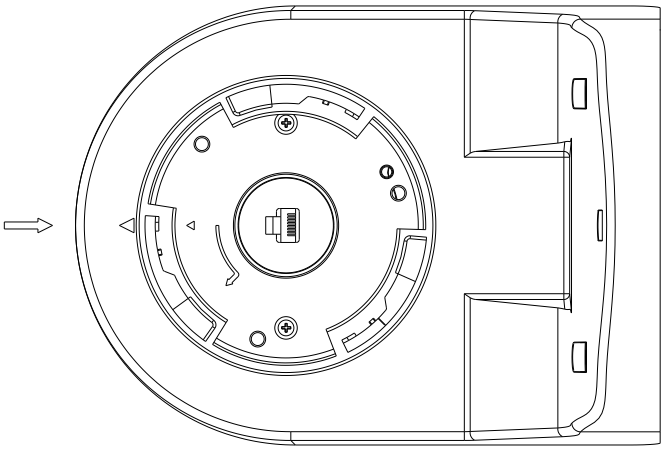
Tighten wall mount bracket to the wall by 3 PAN Head Tapping screws



Tighten the plate to wall mount bracket with M4*10 screws, and connect all necessary cables through the hole on the plate and wall mount kit



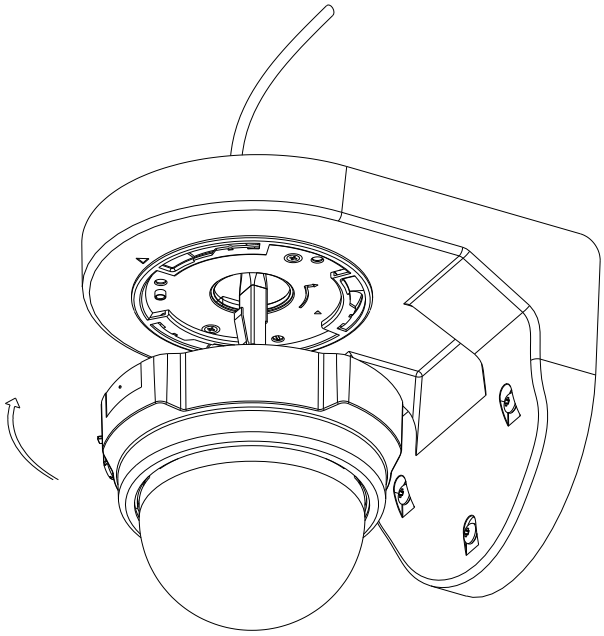
Note: that there's a triangle mark on both plate and wall mount kit. Those triangle marks need to be fixed to the same direction.



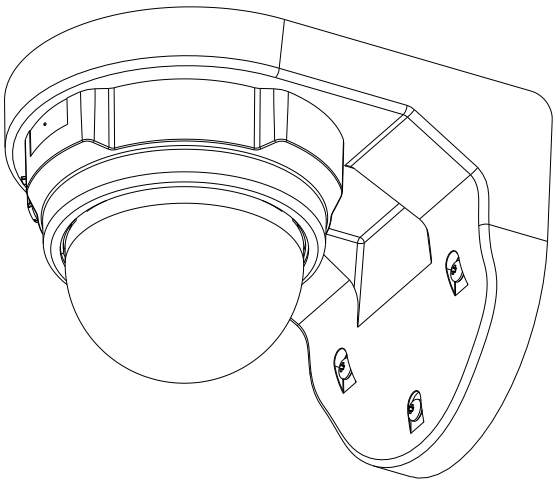
Insert the Network cable through the mounting plate and connect to the camera. Then use

the little strap in bundled accessory to fasten the network cable.

Fasten the camera to wall mount kit by turning clockwise direction

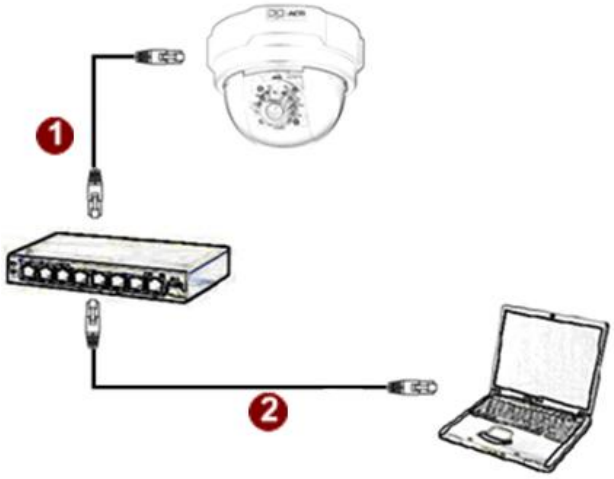


Done



Basic Connections

Follow the procedures below to connect the IP device to the respective apparatuses.



Please use a PoE (Power over Ethernet) supported switch or injector:

1) Connect your IP Camera to the Switch / Injector by CAT5 or CAT6 cables with RJ45 connector.
2) Connect your Switch / Injector to PC with another CAT5 / CAT6 network cable.

Product Specification

	TCM-3111
• Device	
Device Type	Fixed Dome Camera
Image Sensor	Progressive Scan CMOS
Sensor Size	1/3" (4.8 x 3.6 mm)
Day / Night	Yes (electronic)
Minimum Illumination	Color: 0.5 lux at F1.0 (30 IRE, 2400°K); B/W: 0.5 lux
Color to B/W switch	DSP based switch, configurable
Mechanical IR Cut Filter	No
IR Sensitivity Range	No
IR LED	No
Electronic Shutter	1/30 - 1/1,000 sec (60Hz); 1/25 - 1/1,000 sec (50Hz) (manual mode) 1/5 - 1/15,000 sec (auto mode)
• Lens	
Focal Length	Fixed focal, f4.2 mm / F1.8
Iris	Fixed iris
Focus	Fixed focus
Horizontal Viewing Angle	68.15°
Viewing Angle Adjustment	Pan: 0° - 170°; Tilt: 0° - 180°
• Video	
Compression	H.264, MPEG-4 SP, MJPEG
Maximum Frame Rate vs. Resolution	18 fps at 1280 x 1024 (SXGA); 26 fps at 1280 x 720 (HD 720p) ; 30 fps at 640 x 480 (VGA); 30 fps at 320 x 240 (QVGA); 30 fps at 160 x 112 (QQVGA)
Multi-Streaming	Simultaneous dual streams based on two configurations
Bit Rate	28 Kbps - 6 Mbps (per stream)
Bit Rate Mode	Constant, Variable
S/N Ratio	More than 44 dB
Image Enhancement	White balance: automatic, hold, predefined and manual; Brightness; Saturation; Contrast; Sharpness; Automatic gain control; Auto exposure: automatic, predefined and manual; Flickerless
Privacy Mask	4 configurable regions
Text Overlay	User defined text on video
Image Orientation	Image flip and mirror
• Network	
Protocol & Service	TCP, UDP, HTTP, HTTPS, DHCP, PPPoE, RTP, RTSP, IPv6, DNS, DDNS, NTP, ICMP, ARP, IGMP, SMTP, FTP, UPnP, SNMP, Bonjour
Ethernet Port	1, Ethernet (10/100 Base-T), RJ-45 connector
Security	IP address filtering; HTTPS encryption; Password protected user levels; IEEE 802.1X network access control
• Alarm	
Alarm Trigger	Video motion detection (3 regions)
Alarm Response	Notify control center; Change camera settings; Command other devices; E-mail notification with snapshots; Upload video, snapshot to FTP server
• General	
Power Source / Consumption	PoE Class 3 (IEEE802.3af) / 4.368 W
Weight	270 g (0.6 lb)
Dimensions (Φ x H)	130 mm x 99 mm (5.12" x 3.90")
Operating Temperature	-10 °C ~ 50 °C (14 °F ~ 122 °F)
Operating Humidity	10% ~ 85% RH
Approvals	CE, FCC
• Integration	
Unified Solution	Fully compatible with ACTi software
ISV Integration	Software Development Kit (SDK) available
Firmware Access Browser	Microsoft Internet Explorer 6.0 or newer

2. Accessing Camera

If you have DHCP server / router in your network:

Many network server / routers are able to automatically provide IP addresses through DHCP. If you are using such a network, just plug in your computer and IP Camera into the network and your IP device will acquire network address by itself. Find and access the device with our IP Utility program. You may download it at:

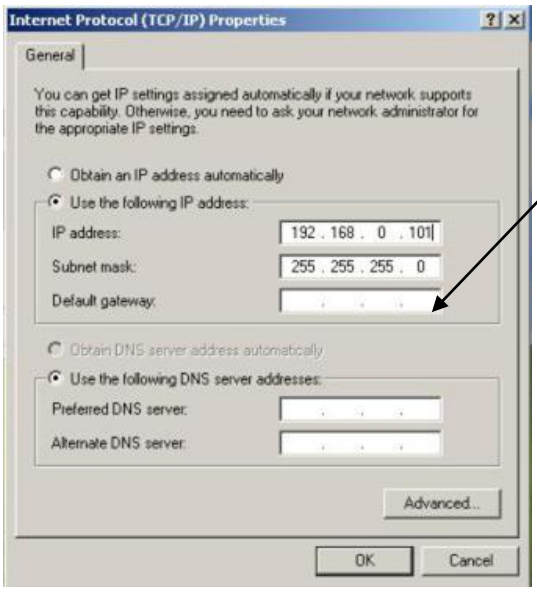
http://www.acti.com/product/detail/Software/ACTi_Utility_Suite

If you do *NOT* have DHCP server / router in your network:

1. Configure your PC to use the same subnet by changing your PC's IP address to the subnet with prefix 192.168.0.XXX. The last number should be anything from 1 to 254 except 100 and other occupied IP addresses. Subnet mask should be 255.555.255.0.

2. **The default IP used by this device is 192.168.0.100. Please make sure your PC is *NOT* using this address and that no two equipments use the same IP address in the network.**

3. Change your IP address by going to Control Panel ->Manage Network Connections -> Right click on the connection to change -> Option -> TCP/IP IPv4 Properties.


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 192 . 168 . 0 . 101
Subnet mask: 255 . 255 . 255 . 0
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

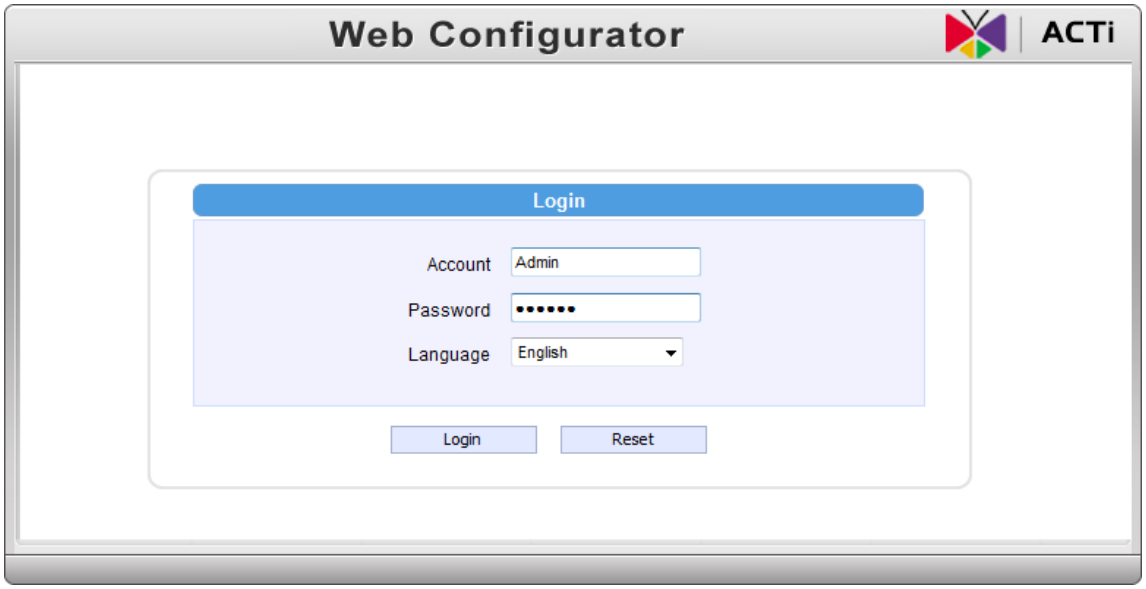
Please set the settings as below.

-
- IP address: 192.168. 0.xxx
- Subnet mask: 255.255.255. 0

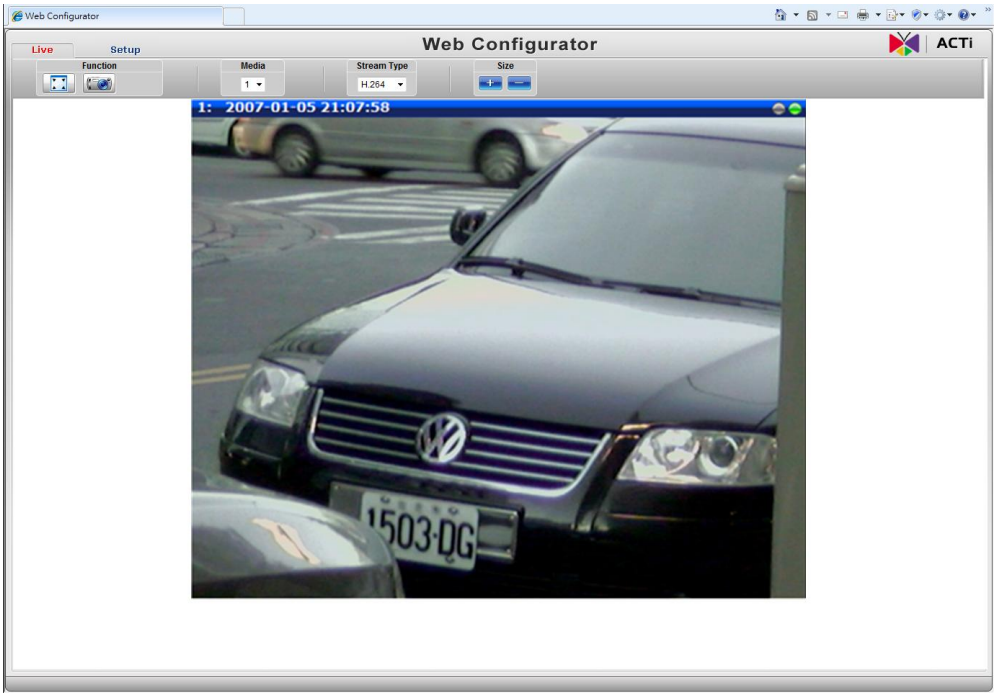
(**NOTE**: xxx should be a number from 1 to 254 except 100, which is used by the IP device. Please also make sure that no two equipments use the same IP address in the

4. Open Internet Explorer (Version 6.0 or above) , and type in the Default IP:
   192.168.0.100

5. When you see the login window, please input default user and password:
   Default User: Admin Password: 123456



6. After logging in, you will see the video from camera. To go to the main menu, click the "Setup" button on the top left.



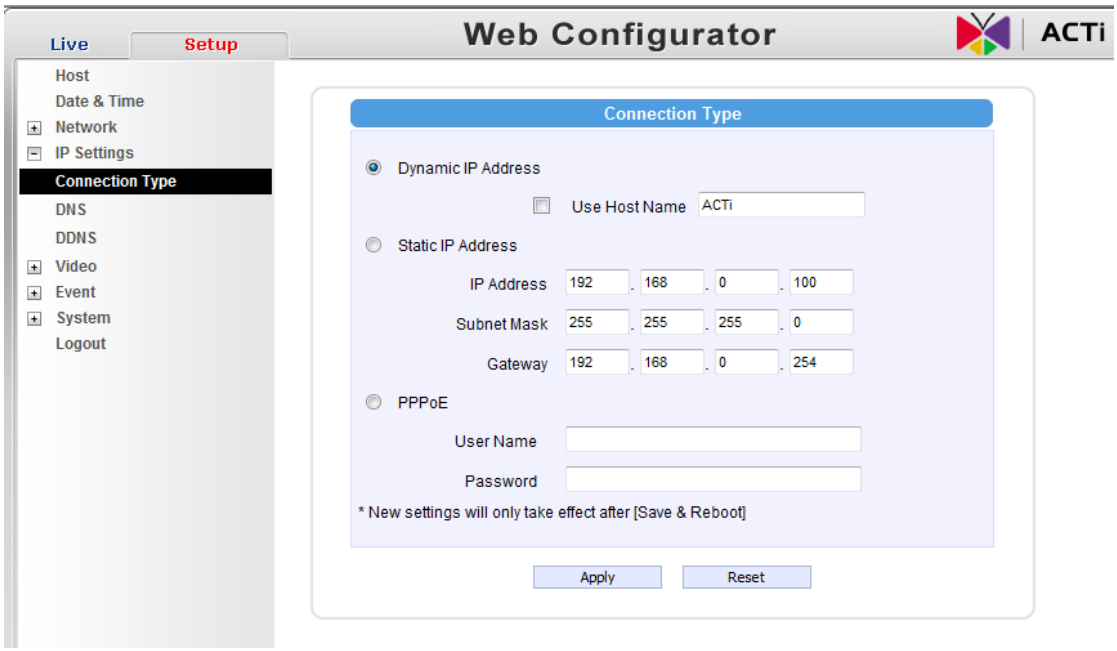
If you are using a single camera, this is enough to access the device.

If you are using multiple devices, you need to change the current device to another unused IP address, so that when the next device is connected to the network, no two devices use the same IP. Please perform the following steps.

7. Go to IP Settings -> Connection Type

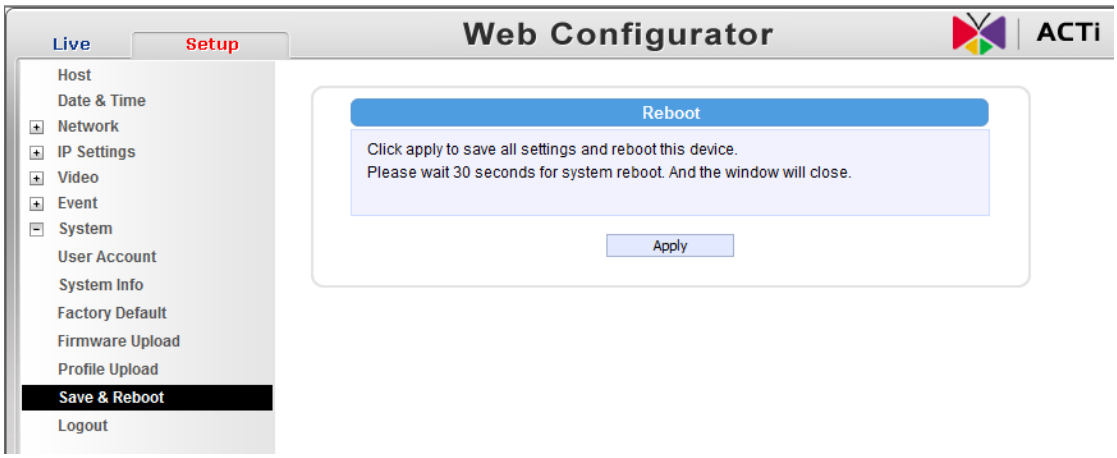
8. Change the IP mode to Static.

9. Change the IP to 192.168.0.101 or any other unused IPs. Do NOT use the PC's IP address or 192.168.0.100.). If this is not the first device you add to the network, please also avoid other devices' IPs.



10. Click "Apply"

11. Please go to System -> Save & Reboot, and click "Apply". Internet Explorer will close after a few seconds. This is normal.



12. Wait for 30 seconds, and open IE again to connect to the **new IP**. (In this example, 192.168.0.101). For the second device or more you add into the network, please type the correct IP.

13. Adjust the default Video setting by going to Video -> Video